Specialist High Skills Major

Sector-Specific Guide

Transportation

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Contents

A. Overview 2

B. Advantages of Earning a Specialist High Skills Major (SHSM) in Transportation 3

C. Required Components for the SHSM–Transportation 5

D. Pathways for the SHSM–Transportation 12

E. Occupations in the Transportation Sector 16

F. Postsecondary Programs and Training Related to Careers in the Transportation Sector 18

G. Resources 20

H. Appendices 23

Program Profiles **37**

A. Overview

The Specialist High Skills Majors (SHSM), launched in September 2006, are part of the Student Success Strategy initiative, which focuses on expanding quality learning opportunities and supporting success for all students. The SHSM is a ministry-approved specialized program that allows students to focus their learning on a specific economic sector while meeting the requirements for the Ontario Secondary School Diploma (OSSD). This career-focused program is also designed to help prepare students to make the transition from secondary school to apprenticeship training, college, university, or the workplace. An SHSM enables students to gain sector-specific skills and knowledge in the context of engaging, career-related learning environments and helps them focus on graduation and on pursuing their postsecondary goals.

The ministry has published the *Specialist High Skills Major Implementation Guide*, as well as sector-specific guides, like this one, for each of the SHSM economic sectors. Boards and schools are strongly encouraged to refer to the *SHSM Implementation Guide* along with the SHSM sector-specific guides when planning and implementing an SHSM.

This guide provides information about the five required components of the SHSM–Transportation, sample pathways for the SHSM, examples of postsecondary programs in the sector, a list of resources, and profiles of the programs that were being offered in Ontario schools in 2007–08.

B. Advantages of Earning a Specialist High Skills Major (SHSM) in Transportation

Transportation affects our lives in a multitude of ways. We drive cars for everyday purposes, use mass transit to commute to work, and fly and cruise on holidays. Transportation systems move raw materials to manufacturers and finished products to consumers locally, nationally, and globally. In addition to being essential to our daily lives, transportation and transportation systems are an important area of employment in our economy. Transport Canada's *Transportation in Canada 2006*[*] reports that the industry provided work for approximately 881 000 people in 2006 and that employment in this sector "has grown steadily since 2000, reflecting a high demand for qualified personnel".

The SHSM–Transportation provides students with a strong foundation for a wide variety of careers in the transportation sector, from those focusing on the service, repair, and modification of vehicles and vehicle systems to those related to the organization and management of transportation services and mass-transit systems.

Pursuing the Specialist High Skills Major–Transportation enables students to:

- customize their secondary school education to suit their interests and talents while meeting the requirements for the OSSD;
- select a bundle of 10 required credits focused on sector-specific knowledge and skills that are:
  - valued by the transportation sector and postsecondary educational institutions;
  - designed to help prepare students for a postsecondary destination of their choice in this economic sector;
  - designed with the flexibility to allow students to shift between pathways (e.g., switch from a pathway leading to college to an apprenticeship pathway) or to discontinue the SHSM program should their career plans change in Grade 11 or 12;
- provide evidence of achievement of the required components of the SHSM (e.g., sector-recognized certifications) for prospective employers and postsecondary educational institutions;
- explore, identify, and refine career goals and make informed decisions about their postsecondary options;
- take part in "reach ahead" experiences that will help them gain confidence in their ability to be successful, refine skills and work habits, and make an informed choice about future careers and next steps;

[*] Published online, at www.tc.gc.ca/pol/en/Report/anre2006/tc2006ar-e.pdf

- develop Essential Skills and work habits that are required in the sector, and have their performance of those skills and work habits assessed and documented, using tools connected with the Ontario Skills Passport;
- access resources, equipment, and expertise that may not be available in their secondary school.

C. Required Components for the SHSM–Transportation

Required Components for the SHSM–Transportation

1. a bundle of 10 Grade 11 and Grade 12 credits that includes:
   - i) 4 transportation major credits that provide sector-specific knowledge and skills;
   - ii) 4 other required credits from the Ontario curriculum, in English, mathematics, and science, in which some expectations are met through learning activities contextualized to the transportation sector;
   - iii) 2 cooperative education credits that provide authentic learning experiences in a workplace setting, enabling students to refine, extend, apply, and practise sector-specific knowledge and skills
2. 7 sector-recognized certifications and/or training courses/programs (4 compulsory and a choice of 3 from a list of additional certifications and training courses/programs)
3. experiential learning activities within the sector
4. "reach ahead" experiences connected with the student's postsecondary pathway
5. development of Essential Skills and work habits required in the sector, and use of the Ontario Skills Passport (OSP) for purposes of documentation

Students earning an SHSM receive an OSSD with the red SHSM seal as well as an SHSM Record that documents the student's achievement of the required components.

The five required components for an SHSM diploma designation are designed to give students a rich and varied range of curriculum-based and experiential learning experiences, as a foundation for making a successful transition to their chosen postsecondary education or training program or occupation.

Local circumstances, such as facilities and equipment, staff qualifications, partnerships, and agreements, determine how the SHSM's required components can be offered to students. Depending on these circumstances, the components may be delivered in a secondary school, college, training centre, other approved site, or a combination of these delivery settings. See the *SHSM Implementation Guide* for more information on delivery models.

No substitutions for any of the five required components of an SHSM are permitted.

1. Bundled Credits

Each SHSM has a bundle of credits that consists of major credits, other required credits, and cooperative education credits. The bundle for the SHSM–Transportation consists of:

i) 4 major credits;

ii) 4 other required credits;*

iii) 2 cooperative education credits.

The credits in the bundle prepare students for one of four postsecondary options – apprenticeship training, college, university, or the workplace.

i) Major credits

Each SHSM has four major credits that enable students to build a foundation of sector-focused knowledge and skills. The major credits may be:

- credits for Ontario curriculum courses;
- credits for ministry-approved locally developed courses (LDCs); or
- dual credits, which are subject to their own approval policies and procedures.

ii) Other required credits

In addition to the major credits, each SHSM includes *other required credits* from the Ontario curriculum. (In the SHSM–Transportation, the other required credits are in English, mathematics, and science.) These courses are delivered by the teachers of the required subjects, and involve the use of contextualized learning activities (CLAs), which enable students to connect their learning in these courses to their SHSM sector. CLAs are based on curriculum expectations from the required course. One or more CLAs, totalling a minimum of six hours in length, must be incorporated into each required course. (A CLA template is provided in Appendix A.)

iii) Cooperative education credits

Cooperative education provides authentic learning experiences in a workplace setting that enable students to refine, extend, apply, and practise the sector-specific knowledge and skills acquired in the bundle of credits. Each SHSM requires that students complete a minimum of two credits in cooperative education linked to the major credits. (More than two credits are recommended, if the student's timetable permits.)

Students may earn their minimum of two cooperative education credits in Grade 11 and/or Grade 12, as a single credit in each grade or a double credit in one grade. (Students in the university pathway, however, are advised to complete their cooperative education credits in Grade 11, in order to allow room in their timetables in Grade 12 for credits needed to meet university entrance requirements.) Depending on local circumstances, students may have to complete their cooperative education credits through continuing education, in the summer, or through virtual cooperative education. See *Cooperative Education and Other Forms of Experiential Learning: Policies and Procedures for Ontario Secondary Schools, 2000*.

* SHSMs in other sectors may require only 2 or 3 "other" credits. For details, see the other sector-specific guides.

Summary of the Required Credits in the Bundle for the SHSM–Transportation

The 10 required credits in the bundle for the SHSM–Transportation are identified in the table below. No substitutions for the credits in the bundle are allowed, and the credits must be at the specified grade level. School boards are required to submit for ministry approval their proposed pathway chart for each SHSM offered by their schools, indicating the credits in each bundle by pathway. Once a credit bundle is approved, the board may not change any of the credits in the bundle for that school year.

Required Credits in the Bundle for the SHSM–Transportation

Credits	Apprenticeship Training		College		University		Workplace	
	Gr. 11	Gr. 12	Gr. 11	Gr. 12	Gr. 11	Gr. 12	Gr. 11	Gr. 12
Transportation Major*	2	2	2	2	2	2	2	2
English	1	1	1	1	1	1	1	1
Mathematics	1		1		1		1	
Science	1		1		1		1	
Cooperative Education	2		2		2		2	
Total number of credits	10		10		10		10	

* Multiple credits in the Ontario technological education curriculum allow additional instructional time for the practice and refinement of skills needed to develop student performance to the levels required for certification, entry into apprenticeship programs, or participation in school–work transition programs (see *The Ontario Curriculum, Grades 11 and 12: Technological Education, 2000*, page 6).

A pathways chart is given on page 14, showing subjects and courses that students could take to explore the SHSM–Transportation in Grades 9 and 10, and courses they would have to take in Grades 11 and 12 to complete this specialized program. Sample bundles of credits that would meet the requirements for the SHSM–Transportation are provided on page 15.

2. Sector-Recognized Certification and Training

Sector-recognized certifications and training courses/programs, including those addressing safety, are important for students who are working towards the SHSM and provide them with an advantage when they are entering the workforce, whatever their chosen career goal may be.

Certification and training courses/programs must:

- be delivered by a certified trainer – a person recognized by the certification provider or by the sector as an authority. (This requirement does not apply to WHMIS.);
- include an assessment and evaluation component;

- include, wherever possible, documentation such as a certificate or other proof of completion for the student's portfolio and the student's SHSM Record. The SHSM Record will indicate the title of each certification earned or training course/program completed, the number of hours involved, and the date the certification/training was completed.

The SHSM in transportation requires students to complete seven (7) sector-recognized certifications and/or training courses/programs. Of these, four (4) are compulsory and the remaining three (3) are to be chosen from the list in the following chart. These requirements are summarized below:

SHSM–Transportation: Sector-Recognized Certification and Training

Four (4) compulsory			
Standard First Aid	Cardio-Pulmonary Resuscitation (CPR)	health and safety – basic	generic (i.e., not site-specific) instruction about the Workplace Hazardous Materials Information System (WHMIS)
Three (3) from the list below			
air brake	all-terrain vehicle safety	CAD/CAM	customer service
Dare to Care – Vehicle Sales and Service	Drive Clean	environmental spill	ergonomics
fall protection	filling propane and motor fuel tanks	fire extinguishing	lift truck
lockout/tagging	ozone depletion	pleasure craft operation	vehicle lift safety training

Note: Items that are capitalized are the *proper names* of specific certifications or training courses/programs that are appropriate for the SHSM. Items that are lowercased are names of the areas or categories within which specific certification or training courses/programs should be selected by the school or board.

Boards and schools may provide opportunities for students to complete additional training.

No substitutions for items in the above lists or changes in the *number* of required certifications and training courses/programs are permitted.

3. Experiential Learning Activities

The SHSM experiential learning requirement consists of planned learning activities that take place outside the traditional classroom setting. Experiential learning, which can include job shadowing, job twinning, work experience, virtual work experience, and cooperative education (see Appendix B), enables students enrolled in the SHSM to find out about opportunities available to them in connection with the careers that interest them.

Experiential learning activities give students opportunities to explore, observe, participate in, and reflect on a variety of sector-specific experiences and careers. They also enable students to increase their awareness of, and develop, the Essential Skills and work habits required in the sector, and have their performance of those skills and habits assessed and documented, using tools connected with the Ontario Skills Passport. An experiential assignment or task could require students to identify examples of how the Essential Skills are applied in specific trades and administrative and management occupations (e.g., estimator, safety officer) in a transportation business.

Experiential learning opportunities could include:

- one-on-one observation of a cooperative education student in a placement in the transportation sector (example of job twinning);
- a day-long observation of a skilled tradesperson in the transportation sector (example of job shadowing);
- a one- or two-week work experience with a member of an industry association or a professional in the sector (example of work experience);
- participation in a local, provincial, or national skills competition with Skills Canada;
- a tour of an automobile dealership, specialized transportation business, or municipal transportation department office and garage;
- attendance at a transportation sector trade show, conference, or job fair.

An experiential learning activity connected with the student's postsecondary pathway can be considered a "reach ahead" experience (see section 4, below). For example, job shadowing a skilled tradesperson in a local transportation business would be an experiential learning activity for all students in a Transportation SHSM, but it could also be a "reach ahead" experience for a student considering a career as such a tradesperson. Note, however, that the activity can be recorded *only once* on the student's SHSM Record – as either an experiential learning activity or a "reach ahead" experience. This restriction reflects the expectation, described earlier, that the student's SHSM program will offer a rich and varied range of experiential learning opportunities.

Cooperative education is also a form of experiential learning. However, for the purposes of the SHSM program requirements and the student's SHSM Record, the two cooperative education credits must be counted as part of the SHSM bundled credit requirement.

Experiential learning placements for students must be arranged by the school and must meet the following requirements:

- A placement must be assessed by a teacher before the student is assigned to it to ensure that the placement offers a positive learning environment and a safe workplace. (*See Cooperative Education and Other Forms of Experiential Learning: Policies and Procedures for Ontario Secondary Schools*, 2000. Available online at www.edu.gov.on.ca/eng/document/curricul/secondary/coop/cooped.pdf.)
- A placement must have Workplace Safety and Insurance Board coverage through the ministry or the workplace.(See Policy/Program Memorandum No. 76A, September 27, 2000; excerpted in Appendix B of the *SHSM Implementation Guide*.)

For more information consult *Live Safe! Work Smart! Appendix for Cooperative Education and Other Forms of Experiential Learning*, at www.livesafeworksmart.net/english/coop/coop_appdx.htm.

For a summary of the regulations governing age requirements for working in and/or visiting workplaces in Ontario, see Appendix C.

4. "Reach Ahead" Experiences

Students in the SHSM in transportation must have learning experiences connected with their postsecondary pathway. "Reach ahead" experiences can range from visiting a college to investigate the program a student is considering, to sitting in on university classes in a student's field of interest, to discussing the postsecondary education, training, and experiences of someone in the occupation a student is interested in. These experiences can vary in length – from a few hours to the time necessary for a full course. Examples include:

- *Workplace:* visiting the shop of a small-engine repair business
- *Apprenticeship training:* teaming up with an apprentice in an in-school lab setting at a college
- *College:* monitoring classes in industrial or automotive engineering at a college
- *University:* spending a day with a design engineer in a vehicle manufacturing facility
- *All pathways:* touring a vehicle manufacturing company or a business that recovers and recycles vehicle components (e.g., engines)

Every "reach ahead" experience should have an assignment or task associated with it. For example, the assignment for a student considering an apprenticeship pathway could be to interview a tradesperson to discover details about his or her training, and to write a report summarizing the tradesperson's answers.

5. Development of Essential Skills and Work Habits, and Use of the Ontario Skills Passport (OSP) for Purposes of Documentation

Human Resources and Social Development Canada (HRSDC) has identified and validated the Essential Skills that people need for life, learning, and work. Essential Skills are foundational skills that make it possible to learn technical skills and other job- or workplace-specific skills.

They are skills that enable people to perform tasks required in their jobs and to participate fully in the workplace and in the community. These Essential Skills are transferable from school to work, job to job, and sector to sector. The Ministry of Education and the Ministry of Training, Colleges and Universities have developed the Ontario Skills Passport (OSP) on the basis of the HRSDC's Essential Skills. The OSP also incorporates work habits that are beneficial not only for work but also for life and learning. The skills and work habits included in the OSP are as follows:

Essential Skills	Work Habits
• Reading Text • Writing • Document Use • Computer Use • Oral Communication *Numeracy* • Money Math • Scheduling or Budgeting and Accounting • Measurement and Calculation • Data Analysis • Numerical Estimation *Thinking Skills* • Job Task Planning and Organizing • Decision Making • Problem Solving • Finding Information	• Working Safely • Teamwork • Reliability • Organization • Working Independently • Initiative • Self-Advocacy • Customer Service • Entrepreneurship

The Ontario Skills Passport provides clear descriptions of Essential Skills that are used in nearly all occupations and of work habits that are important for success in the workplace. The OSP provides a common language that helps students build competence and confidence and make connections between school and their prospective careers. The OSP also provides employers with a consistent method of assessing the student's demonstration of these skills and work habits in the workplace.

Sector representatives consulted on the development of the SHSMs emphasized the importance of the Essential Skills and work habits included in the OSP. Students pursuing an SHSM–Transportation track their development of Essential Skills and work habits in their OSP Work Plan throughout their experiential learning activities (including cooperative education placements and "reach ahead" experiences). In consultation with the teacher, employers assess each student's demonstration of Essential Skills and work habits identified in the OSP and record their assessments in the student's OSP Work Plan.

See the *SHSM Implementation Guide* for more information about the OSP and how it can be used in connection with an SHSM program. The OSP website (http://skills.edu.gov.on.ca) also offers resources for the use of the OSP in SHSM programs.

D. Pathways for the SHSM–Transportation

This section contains the following:

- ideas that schools and boards can use to promote awareness and exploration of the SHSM–Transportation among students and to help students as they make the decision to specialize in this program
- a chart showing a pathways template for completing the SHSM–Transportation
- a chart that contains sample bundles of credits for the SHSM–Transportation

Strategies for Promoting and Suggestions for Planning the SHSM–Transportation

Grades 7 and 8: Awareness

The following are examples of strategies that boards and schools can use to build Grade 7 and 8 students' awareness of the SHSM program:

- organize field trips, competitions, and activities in the community that are specific to the SHSM
- host presentations or talks on careers with guest speakers and mentors from the sector
- hold a summer program sponsored by the sector before students enter secondary school
- organize experiences at a secondary school in the program related to this sector
- invite current SHSM–Transportation students to share their experiences

Grades 9 and 10: Exploration

Students who are considering pursuing the SHSM–Transportation can be encouraged to enrol in the following courses to become better informed about careers and postsecondary options related to the transportation sector:

- Integrated Technologies: A Grade 9 course recommended for all SHSM pathways that have a technological education focus. It provides students with opportunities to explore a variety of technologies, including transportation technology, by engaging in activities related to them.
- Career Studies (compulsory) and Discovering the Workplace: Some of the expectations in these Grade 10 courses provide opportunities for students to explore occupations and other postsecondary options in the sector and to participate in experiential learning activities.

- Transportation Technology: Recommended for any Grade 10 student who is considering entering an SHSM–Transportation. It provides students with opportunities to explore transportation technology, identify personal interests and aptitudes, and investigate the SHSM–Transportation.

Grades 11 and 12: Specialization

Students acquire the sector-specific knowledge and skills required to earn their OSSD with an SHSM–Transportation by completing its five required components. Students and their parents/guardians are encouraged to consult with guidance counsellors and teachers to select the courses that will enable them to pursue their goals.

Transportation sector contacts have identified knowledge of entrepreneurship and basic business practices as important for students as they prepare for careers in this sector. It is, therefore, recommended that in Grade 11 or 12 students do one of the following:

- complete an entrepreneurship course offered in the Ontario Business Studies curriculum
- pursue an extracurricular activity focused on entrepreneurship (e.g., participation in Junior Achievement's Company Program)

Students pursuing an apprenticeship pathway should consider the Ontario Youth Apprenticeship Program (OYAP), which enables them to start an apprenticeship while earning their OSSD.

Pathways Template for the SHSM–Transportation

- Shaded boxes – required credits in the bundle for the SHSM–Transportation
- (C) – compulsory credits for the OSSD
- (R) – courses that are recommended in light of the student's pathway and career interests

Grade 9 *Exploration*	**Grade 10** *Exploration*	**Apprenticeship Training Pathway** *Specialization*		**College Pathway** *Specialization*		**University Pathway** *Specialization*		**Workplace Pathway** *Specialization*	
		Grade 11	**Grade 12**	**Grade 11**	**Grade 12**	**Grade 11**	**Grade 12**	**Grade 11**	**Grade 12**
An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit
(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English
(C) Mathematics	(C) Mathematics	(C) Mathematics	(R) Mathematics	(C) Mathematics	(R) Mathematics	(C) Mathematics	(R) Mathematics	(C) Mathematics	(R) Mathematics
(C) Science	(C) Science	Science *in either Gr. 11 or Gr. 12*	An optional or a compulsory credit *in either Gr. 11 or Gr. 12*	Science *in either Gr. 11 or Gr. 12*	An optional or a compulsory credit *in either Gr. 11 or Gr. 12*	Science	(R) Mathematics	Science	(R) Science
(C) Geography of Canada	(C) Canadian History	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**
(C) Core French	(C) Career Studies/ Civics	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**	**Transportation Major**
(C) Healthy Active Living Education	(C) The Arts	May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*		May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*		May be used as a (C) Cooperative Education (2 credits) *recommended in Gr. 11**		May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*	
(R) Integrated Technologies	(R) Transportation Technology	(R) Business/ Entrepreneurship or an optional or a compulsory credit	(R) Cooperative Education	(R) Business/ Entrepreneurship or an optional or a compulsory credit	(R) Cooperative Education	(R) Science	(R) Science	(R) Cooperative Education	(R) Business/ Entrepreneurship or an optional or a compulsory credit

* Students in the university pathway are advised to complete their cooperative education credits in Grade 11, in order to allow room in their timetables in Grade 12 for credits needed to meet university entrance requirements.

Sample Bundles of Credits for the SHSM–Transportation

- Shaded boxes – required credits in the bundle for the SHSM–Transportation
- (C) – compulsory credits for the OSSD
- (R) – courses that are recommended in light of the student's pathway and career interests
- The letters C, E, M, O, and U at the end of course codes indicate the following types of courses: C – college preparation; E – workplace preparation; M – university/college preparation; O – open; U – university preparation
- A list of **all** courses that are approved for inclusion in the bundle of credits for an SHSM–Transportation is available on the Ministry of Education website, at www.edu.gov.on.ca

Apprenticeship Training Pathway		College Pathway		University Pathway		Workplace Pathway	
Grade 11	**Grade 12**	**Grade 11**	**Grade 12**	**Grade 11**	**Grade 12**	**Grade 11**	**Grade 12**
An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit
(C) ENG3C English	(C) ENG4C English	(C) ENG3C English	(C) ENG4C English	(C) ENG3U English	(C) ENG4U English	(C) ENG3E English	(C) ENG4E English
(C) MCF3M Functions and Applications	(R) MCT4C Mathematics for College Technology	(C) MCF3M Functions and Applications	(R) MCT4C Mathematics for College Technology	(C) MCR3U Functions	(R) MHF4U Advanced Functions	(C) MEL3E Mathematics for Work and Everyday Life	(R) MEL4E Mathematics for Work and Everyday Life
SNC3E Science	SNC4E Science	SNC3M Science	SPH4C Physics	SPH3U Physics	(R) MCV4U Calculus and Vectors	SNC3E Science	(R) SNC4E Science
Transportation Major TTJ3C Transportation Technology	**Transportation Major** TTJ4C Transportation Technology	**Transportation Major** TTJ3C Transportation Technology	**Transportation Major** TTJ4C Transportation Technology	**Transportation Major** TTJ3C Transportation Technology	**Transportation Major** SPH4U Physics	**Transportation Major** TTJ3E Transportation Technology	**Transportation Major** TTJ4E Transportation Technology
Transportation Major TTJ3C Transportation Technology	**Transportation Major** TTJ4C Transportation Technology	**Transportation Major** TTJ3C Transportation Technology	**Transportation Major** TTJ4C Transportation Technology	**Transportation Major** TTJ3C Transportation Technology *or* TDJ3M Technological Design	**Transportation Major** TDJ4M Technological Design	**Transportation Major** TTJ3E Transportation Technology	**Transportation Major** TTJ4E Transportation Technology
May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*		May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*		May be used as a (C) Cooperative Education (2 credits) *recommended in Gr. 11**		May be used as a (C) Cooperative Education (2 credits) *in either Gr. 11 or Gr. 12*	
(R) BDI3C Entrepreneurship: The Venture	(R) Cooperative Education	(R) BDI3C Entrepreneurship: The Venture	(R) Cooperative Education	(R) SCH3U Chemistry	(R) SCH4U Chemistry	(R) Cooperative Education	(R) BOG4E Business Leadership: Becoming a Manager

* Students in the university pathway are advised to complete their cooperative education credits in Grade 11, in order to allow room in their timetables in Grade 12 for credits needed to meet university entrance requirements.

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E. Occupations in the Transportation Sector

The National Occupational Classification (NOC) is a system that describes and classifies all occupations in Canada using four-digit codes called National Occupation Codes (NOCs). This system and the codes are the authoritative source for occupational information in Canada. Entering one of these four-digit codes in the "Quick Search" box on the NOC website (http://www23.hrdc-drhc.gc.ca/2001/e/generic/welcome.shtml) provides occupational information related to that career.

For more information on occupations, go to the Ontario Skills Passport website (http://skills.edu.gov.on.ca), click on "Occupations and Tasks" in the navigation bar, select "Sorted by NOC", and click on the "Sample Workplace Tasks" checkmark for one of the occupations to view a description of the occupation, an overview of the Essential skills required in the occupation, a list of sample tasks for the occupation, and assessment tools and other career and employment information related to the occupation.

The following are examples of occupations in the transportation sector, with corresponding NOC codes, sorted according to the type of postsecondary education or training the occupations would normally require.

Note: Some of the names of occupations given below may differ slightly from the names in the NOC. The names listed here reflect common usage by institutions and organizations in this sector in Ontario.

Apprenticeship Training

- Alignment and Brakes Technician 7321
- Auto Body Repairer 7322
- Automotive Painter – Motor Vehicle Repair 7322
- Automotive Service Technician 7321
- Marine Engine Mechanic 7311
- Motorcycle Technician 7334
- Parts Technician 1472
- Recreation Vehicle Service Technician 7383
- Small Engine Mechanic 7335
- Transmission Technician 7321
- Truck and Coach Technician 7321
- Truck and Transport Vehicle Mechanic 7321

College

- Air Pilot 2271
- Industrial Designer 2252
- Industrial Engineering Technician 2233
- Marine Engine Technician 7436
- Mechanical Engineering Technologist 2232
- Navigation Officer – Water Transport 2273
- Quality Control Assembly Inspector – Automotive/Marine Engines 9486
- Supervisors, Motor Transport, and Other Ground Transit Operators 7222

University

- Aerospace Engineer 2146
- Automotive Engineer 2132
- Industrial Designer 2252
- Urban Planner 2153

Workplace

- Aircraft Assembler and Aircraft Assembly Inspector 9481
- Airport Ramp Attendant 7437
- Automobile Salesperson 6421
- Automotive Mechanical Installers and Servicers 7443
- Boat Assembler and Inspector 9491
- Boat Operator 7436
- Bus Driver, Subway Operator, and Other Transit Operator 7412
- Car Lot Attendant 6683
- Delivery and Courier Service Drivers 7414
- Heavy Equipment Operators (except Crane) 7421
- Railway Track Maintenance Worker 7432
- Service Station Attendant 6621
- Tire Repairer 7443

F. Postsecondary Programs and Training Related to Careers in the Transportation Sector

The following are examples of programs and training related to careers in the transportation sector and the accreditations or types of accreditation each results in:

Apprenticeship Training

Alignment and Brakes Technician	Certificate of Apprenticeship/ Certificate of Qualification
Auto Body Repairer	Certificate of Apprenticeship/ Certificate of Qualification
Automotive Painter	Certificate of Apprenticeship/ Certificate of Qualification
Automotive Service Technician	Certificate of Apprenticeship/ Certificate of Qualification
Farm Equipment Mechanic	Certificate of Apprenticeship/ Certificate of Qualification
Heavy Duty Equipment Technician	Certificate of Apprenticeship/ Certificate of Qualification
Motorcycle Technician	Certificate of Apprenticeship/ Certificate of Qualification
Parts Technician	Certificate of Apprenticeship/ Certificate of Qualification
Recreation Vehicle Service Technician	Certificate of Apprenticeship/ Certificate of Qualification
Tire, Wheel, and Rim Mechanic	Certificate of Apprenticeship/ Certificate of Qualification
Transmission Technician	Certificate of Apprenticeship/ Certificate of Qualification
Truck and Coach Technician	Certificate of Apprenticeship/ Certificate of Qualification
Truck Trailer Service Technician	Certificate of Apprenticeship/ Certificate of Qualification

Turf Equipment Technician	Certificate of Apprenticeship/ Certificate of Qualification

College

Air Pilot	Certificate
Applied Business – Automotive Management	Bachelor's degree
Automobile Production Manager	Diploma
Industrial Designer	Diploma
Industrial Engineering Technician	Diploma
Marine Engine Mechanic	Diploma
Navigation Officer – Water Transport	Diploma
Quality Control Assembly Inspector – Automotive/Marine Engines	Diploma
Small Engine Mechanic	Diploma
Stationary Engineer and Auxiliary Equipment Operator	Diploma
Transportation Manager	Diploma

University

Aerospace Engineer	Bachelor's degree
Automotive Engineer	Bachelor's degree
Electrical Engineer	Bachelor's degree
Mechanical Engineer	Bachelor's degree

Training for the Workplace

Air Transport Ramp Attendant	Certificate
Aircraft Assembler and Aircraft Assembly Inspector	Certificate
Airline Sales and Service Agent	Certificate
Boat Assembler and Inspector	Certificate
Boat Operator	Certificate
Bus Driver, Subway Operator, and Other Transit Operator	Certificate
Railway Track Maintenance Worker	Certificate
Small Business Manager	Certificate
Tire and Rim Technician	Certificate

G. Resources

Associations and Other Professional Groups

Air Transport Association of Canada	www.atac.ca/
Alliance of Sector Councils	www.councils.org
Automotive Industries Association of Canada	www.aiacanada.com/
Canadian Automobile Association	www.caa.ca/
Canadian Ship Owners Association	www.shipowners.ca/
Canadian Urban Transit Association	www.cutaactu.on.ca/
Conference Board of Canada	www.conferenceboard.ca
International Technology Education Association	www.iteaconnect.org
Ontario Automobile Association	www.oada.ca
Ontario Cooperative Education Association	www.ocea.on.ca
Ontario Council for Technology Education (OCTE)	www.octe.on.ca
Ontario School Counsellors' Association	www.osca.ca
Railway Association of Canada	www.railcan.ca/
Skills Canada	www.skillscanada.com
Skills Canada – Ontario	www.skillsontario.com
Toronto Automobile Dealers Association	www.tada.ca

Careers

Apprentice Search	www.apprenticesearch.com
Canada Job Futures	www.jobfutures.ca
Career Cruising	www.careercruising.com
Employment Ontario	www.edu.gov.on.ca/eng/tec/etlanding.html

Job Bank	www.jobbank.gc.ca
Labour Market Information	www.labourmarketinformation.ca
Ontario Prospects	www.ontarioprospects.info
Ontario Skills Passport (OSP)	http://skills.edu.gov.on.ca
Ontario WorkInfoNet	www.onwin.ca/english
Statistics Canada	www.statcan.ca
Youth Opportunities Ontario	www.youthjobs.gov.on.ca

Education/Government

Applications of Working and Learning National Project	www.awal.ca/about.asp
Federal Resources for Educational Excellence	www.free.ed.gov
Independent Learning Centre	www.ilc.org
Industry Canada	www.ic.gc.ca/epic/site/ic1.nsf/en/home
Ministry of Education	www.edu.gov.on.ca
Ministry of Labour	www.labour.gov.on.ca
Ministry of Research and Innovation	www.mri.gov.on.ca
Ministry of Training, Colleges and Universities	www.edu.gov.on.ca/eng/tcu
Ontario College Application Service	www.ontariocolleges.ca
Ontario Universities' Application Centre	www.ouac.on.ca
Passport to Prosperity	www.edu.gov.on.ca/passport
Towes: How Do Your Skills Measure Up? Skill Plan	http://measureup.towes.com
Transport Canada	www.tc.gc.ca/

Safety, Training, and Certifications

Canada Safety Council (CSC)	www.safety-council.org
Canadian Centre for Occupational Health and Safety (CCOHS)	www.ccohs.ca/
Canadian Red Cross Society	www.redcross.ca
Electrical Safety Authority	www.esasafe.com
Industrial Accident Prevention Association (IAPA)	www.iapa.ca
Interprovincial Standards Red Seal Program	www.red-seal.ca
Life Saving Society	www.lifesaving.ca/

Live Safe! Work Smart!	www.livesafeworksmart.net/
Ontario Service Safety Alliance	www.ossa.com
Passport to Safety	www.passporttosafety.com/
Prevention Dynamics	www.preventiondynamics.com
St. John Ambulance	www.sja.ca
Virtual WHMIS	www.virtualwhmis.com
Workplace Safety and Insurance Board (WSIB)	www.wsib.on.ca

H. Appendices

Appendix A: Contextualized Learning Activities (CLAs) for the Specialist High Skills Majors

For the "other required credits" in the bundle of credits, students in a Specialist High Skills Major program must complete learning activities that are contextualized to the knowledge and skills relevant to the economic sector of the SHSM. Contextualized learning activities (CLAs) address curriculum expectations in these courses.

CLAs must take a minimum of 6 hours to complete. Boards may choose to develop one activity that takes 6 hours to complete or two or more activities that together take a minimum of 6 hours to complete.

This template must be used to describe the CLAs. The completed form must be submitted to the Ministry of Education for approval.

(continued)

Appendix A ***(continued)***

Contextualized Learning Activity (CLA) Template

Submit all material in Microsoft Word.

Contact Information

Board: _____

Development date: _____

Contact person: _____

Position: _____

Phone: ( )_____-_____ Fax: ( )_____-_____ E-mail: _____

Specialist High Skills Major	
Course code and course title	
Name of contextualized learning activity/activities	

Brief description of contextualized learning activity/activities	
Duration	*(A minimum of 6 hours to complete the CLA(s) is required.)*
Overall expectations	*(Identify the overall expectation(s) to be assessed and/or evaluated through the CLA(s). Include strand title(s).)*
Specific expectations	*(Identify the specific expectations related to the above overall expectation(s) that are addressed in the instructional and assessment strategies of the CLA(s). Include strand title(s) and suborganizer(s).)*
Essential Skills and work habits from the OSP	*(List the Essential Skills and work habits from the OSP that are addressed in the CLA(s).)*
Catholic graduate expectations (if applicable)	

Instructional/Assessment Strategies

Teacher's Notes *(Provide suggestions that will assist the teacher in delivering the CLA(s). For example, remind teachers to make sure that handouts, such as authentic workplace materials/documents used by the sector, are available for the activity.)*

Context *(Describe the workplace context for the activity/activities.)*

Strategies *(In point form, describe the sequence of instructional and assessment strategies that will support the intended learning. Attach all student handouts and worksheets.)*

Assessment and Evaluation of Student Achievement – Summary

(List all assessment and evaluation strategies and tasks, based on the strategies identified in the preceding section. Attach checklists, rubrics, correction keys, etc.)

Strategies/Tasks *(add rows as required)*	**Purpose** Assessment *for* learning (diagnostic, formative) *OR* Assessment *of* learning (summative; for evaluation)
1.	
2.	
3.	
4.	
5.	
6.	

Additional Notes/Comments/Explanations

(Provide additional suggestions for teachers that will help them deliver the CLA(s).)

Resources

(List all the resources needed to support the implementation of the CLA(s).)

Authentic Workplace Materials *(e.g., blueprints, workplace manuals, specification sheets, spreadsheets)*

Human Resources

Print

Video/DVD

Software

Websites

Other

Accommodations

(List instructional, environmental, and assessment accommodations.)

List of Attachments

(Attach all related materials, e.g., student worksheets, tests, rubrics.)

Appendix B: Forms of Experiential Learning and Related Programs

Length	Credit Value	Description	Key Elements
Job shadowing			
1/2 to 1 day (in some cases, up to 3 days)	none	one-on-one observation of a worker at a place of employment	• involves the pairing of a student with a worker in a specific occupation • may be integrated with a credit course • may be part of a student's school–work transition program
Job twinning			
1/2 to 1 day	none	one-on-one observation of a cooperative education student at his or her placement	• involves the pairing of a student with a cooperative education student • may be integrated with a credit course • may be part of a student's school–work transition program
Work experience			
1–4 weeks	none	a planned learning opportunity, within any credit course, that provides students with relatively short-term work experiences, usually of one or two weeks' duration and not exceeding four weeks	• involves a short-term, subject-related work placement • forms an integral part of a specific credit course • requires pre-placement orientation • requires a personalized placement learning plan
Virtual work experience			
the equivalent of 1–4 weeks	none	a simulated work experience, within any credit course, that allows students, including students who receive a special education program or services and students in rural areas, to take advantage of a greater variety of experiences than those available in the local economy	• involves a short-term, subject-related virtual work placement facilitated through the use of computer software and the Internet • forms an integral part of a specific credit course • requires pre-placement orientation • requires a personalized placement learning plan
Cooperative education			
full term (year or semester)	1 credit per 110-hour cooperative education credit course successfully completed	a planned learning experience, for which credits are earned, that integrates classroom theory and learning experiences at a workplace to enable students to apply and refine the knowledge and skills acquired in a related curriculum course or a locally developed course	• requires a personalized placement learning plan • involves the earning of credits • requires 15 hours of pre-placement instruction • is monitored by the cooperative education teacher • has a classroom and a workplace component • involves reflective learning • requires 7 hours of integration per co-op credit

Length	Credit Value	Description	Key Elements
School–work transition programs			
varies, but typically not less than 2 years (3–4 semesters over Grades 11 and 12)	varies with type of planned workplace experience	a combination of school- and work-based education and training involving a variety of learning opportunities	• is oriented towards students who will be entering the workforce directly after high school • involves the development of partnerships with employers • involves the enhancement of curriculum with input from employers • involves the earning of cooperative education credits
Ontario Youth Apprenticeship Program (OYAP)			
varies, but typically not less than 2 years (3–4 semesters over Grades 11 and 12)	varies with opportunities	an opportunity for a student to meet diploma requirements while participating in an apprenticeship occupation	• is designed for students 16 years of age and older who have already earned 16 credits towards the OSSD • may involve the student's registration in an apprenticeship • requires documentation by the student and trainer regarding trade-specific competencies acquired • involves the earning of cooperative education credits

(From Ontario Ministry of Education, *Cooperative Education and Other Forms of Experiential Learning: Policies and Procedures for Ontario Secondary Schools, 2000*, pp. 7–8)

Appendix C: Minimum Age to Work in and Visit Ontario Workplaces[1]

<table>
<tr><th>Specialist High Skills Major[2]</th><th>Type of Workplace</th><th>Minimum Age to Work</th><th>Minimum Age to Visit / Conditions for Visiting[3]</th></tr>
<tr><td>• Arts and Culture
• Business
• Health and Wellness
• Hospitality and Tourism</td><td>Industrial establishments,[4] such as offices, stores, arenas, restaurant serving areas</td><td>14</td><td rowspan="3">The regulation governing industrial establishments (Reg. 851, R.R.O. 1990) made under the OHSA sets out minimum age restrictions for workers, covering workplaces such as offices, stores, arenas, restaurants, and factories. However, the regulation states that people younger than the specified minimum age to work may visit (but not work in) these establishments if:
• they are accompanied by a person who has attained the age of majority (i.e., 18 years of age);
• they are being guided on a tour of the industrial establishment (e.g., office, store, arena, or factory);
• they are in an area of the industrial establishment used for sales purposes; or
• they are in an area of the establishment to which the public generally has access.</td></tr>
<tr><td>• Business
• Hospitality and Tourism
• Manufacturing
• Transportation</td><td>Most factories,[5] including restaurants and any commercial kitchens, automotive service garages, produce and meat preparation or shipping and receiving areas in grocery stores, laundries, and warehouses</td><td>15</td></tr>
<tr><td>• Forestry</td><td>Logging operations[6]</td><td>16</td></tr>
<tr><td>• Construction</td><td>Construction project[7]</td><td colspan="2">16
Under the regulation governing construction projects (O. Reg. 213/91) made under the OHSA, 16 is the minimum age to work on or to visit any construction project. A person under the age of 16 may visit a construction site only when work is not being performed there. (Note that the definitions of construction and construction project include a wide variety of types of work and workplaces. It is important to review the definitions carefully. See note 7, below.)</td></tr>
</table>

All notes appear on pages 33–35.

Specialist High Skills Major[2]	Type of Workplace	Minimum Age to Work	Minimum Age to Visit / Conditions for Visiting[3]
• Mining	Surface mines,[8] mining plants[9] Underground mine Working face of a surface mine	16 18 18	The regulation governing mines and mining plants (Reg. 854, R.R.O. 1990) made under the OHSA allows for tours or visits to mines and mining plants by persons who are younger than the specified minimum age to work if they are accompanied by and under the direction of a guide.
• Agriculture • Arts and Culture • Environment • Health and Wellness • Horticulture and Landscaping	Certain workplaces (or parts thereof) may be covered, with respect to age restrictions, by regulations governing other sectors. For example, see the industrial establishments regulation (Reg. 851, R.R.O. 1990).		
• Construction • Manufacturing	Window cleaning	18	*Not applicable.* (The regulation governing window cleaning is Reg. 859, R.R.O. 1990.)

Notes to Appendix C

1. As specified in regulations made under the Occupational Health and Safety Act (OHSA). Other statutes and regulations made under those statutes also set minimum ages for various occupations.

   In addition, some workplaces have established their own, *more stringent* minimum ages for employment. For instance, some retail establishments and restaurant chains will not hire anyone under the age of 16, even though the legislated minimum age limit is lower. Similarly, some industrial establishments, and other workplaces that require the use of heavy equipment or machinery, will not hire anyone under the age of 18, even though the legislated minimum age limit might be lower. Such in-house minimum age requirements may be acceptable, as long as the limits do not conflict with the Ontario Human Rights Code or other applicable law.

2. Column 1 identifies the Specialist High Skills Majors with which the workplace categories in column 2 may be associated. Note, however, that some specialist programs may involve workplaces identified in more than one category (e.g., a business program may involve offices, factories, and construction sites). When using this chart to verify compliance

(continued)

with minimum age to work and visit requirements, always refer to the particular type of workplaces involved in the program (column 2), not to the sector to which the program relates (column 1).

3. Under certain conditions, as identified in this table, persons younger than the minimum age to work may visit, *but not work in*, certain workplaces.

4. According to the OHSA, ***industrial establishment*** means an office building, factory, arena, shop or office, and any land, buildings and structures appertaining thereto.

5. According to the OHSA, ***factory*** means

   a) a building or place other than a mine, mining plant or place where homework is carried on, where,

      i) any manufacturing process or assembling in connection with the manufacturing of any goods or products is carried on,

      ii) in preparing, inspecting, manufacturing, finishing, repairing, warehousing, cleaning or adapting for hire or sale any substance, article or thing, energy is,

         (A) used to work with any machinery or device, or

         (B) modified in any manner,

      iii) any work is performed by way of trade or for the purposes of gain in or incidental to the making of any goods, substance, article or thing or part thereof,

      iv) any work is performed by way of trade or for the purposes of gain in or incidental to the altering, demolishing, repairing, maintaining, ornamenting, finishing, storing, cleaning, washing or adapting for sale of any goods, substance, article or thing, or

      v) aircraft, locomotives, or vehicles used for private or public transport are maintained,

   b) a laundry including a laundry operated in conjunction with,

      i) a public or private hospital,

      ii) a hotel, or

      iii) a public or private institution for religious, charitable or educational purposes, and

   c) a logging operation.

6. According to the OHSA, ***logging*** means the operation of felling or trimming trees for commercial or industrial purposes or for the clearing of land, and includes the measuring, storing, transporting or floating of logs, the maintenance of haul roads, scarification, the carrying out of planned burns and the practice of silviculture.

7. According to the OHSA, ***construction*** includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.

Project means a construction project, whether public or private, including,

a) the construction of a building, bridge, structure, industrial establishment, mining plant, shaft, tunnel, caisson, trench, excavation, highway, railway, street, runway, parking lot, cofferdam, conduit, sewer, water main, service connection, telegraph, telephone or electrical cable, pipe line, duct or well, or any combination thereof,

b) the moving of a building or structure, and

c) any work or undertaking, or any lands or appurtenances used in connection with construction.

8. According to the OHSA, ***mine*** means any work or undertaking for the purpose of opening up, proving, removing or extracting any metallic or non-metallic mineral or mineral-bearing substance, rock, earth, clay, sand or gravel.

9. According to the OHSA, ***mining plant*** means any roasting or smelting furnace, concentrator, mill or place used for or in connection with washing, crushing, grinding, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any substance mentioned in the definition of "mine" (see note 8, above).

Program Profiles

Program Profile: Durham Catholic District School Board

Name of Initiative	**Automotive Technology**
Brief description	The program focuses on the design and construction of automotive vehicles, the major systems of motor vehicles, the environmental impact of transportation systems, and industry standards and government regulations pertaining to vehicles. The program also addresses systems of energy conversion, diagnostic standards for the service and repair of vehicles, work habits and safety, and automotive business management. Students design and construct motorized vehicles, diagnose problems in and repair vehicles according to industry standards and government regulations, explore business aspects of the automotive sector, and develop effective teamwork skills and strategies.
Number of students	44
Board	**Durham Catholic District School Board** 650 Rossland Rd West Oshawa ON L1J 7C4
Board contact	Name: Shelly Roy Title: Staff Development Student Success Pathway Phone: 905-576-6150 ext. 2200 Fax: 905-576-9306 E-mail: shelly.roy@dcdsb.ca
School	**St. Mary Catholic Secondary School** 1918 Whites Rd Pickering ON L1V 1R9
School contacts	Name: Vince Sorbilli Title: Technological Education Teacher Phone: 905-420-7166 Fax: 905-831-1778 E-mail: vince.sorbilli@dcdsb.ca Name: Walter Klowak Title: Technological Education Teacher Phone: 905-420-7166 Fax: 905-831-1778 E-mail: walter.klowak@dcdsb.ca

Partners:	
Business/Community	- Local Industry Council: Motive Power - Snap-on Tools - Volkswagen Canada
Colleges	- Durham College - Fleming College

Program Profile: Durham District School Board

Name of Initiative	**SHSM–Transportation**
Brief description	Students focus their learning on automotive maintenance and repair and gain valuable skills that are transferable to other transportation sectors. Training in well-equipped transportation technology classrooms in the schools and instruction in motive power at Durham College allow students to acquire the highest level of shills in diagnostics, power transmission, alternative energy sources, and control technology. The Motive Power Local Industry Committee (LIC) provides cooperative education placements, interviews prospective students, and provides advice to the board and the schools regarding the program, which is open to all students in Durham Region.
Number of students	20–40
Board	**Durham District School Board** 400 Taunton Rd East Whitby ON L1R 2K6
Board contact	Name: John Beatty Title: Education Officer, Programs 7–12, Student Success Leader Phone: 905-666-6971 Fax: 905-666-6370 E-mail: beatty_john@durham.edu.on.ca
School 1	**Dunbarton High School** 655 Sheppard Ave Pickering ON L1V 1G2
School contact	Name: Richard White Title: Principal Phone: 905-839-1125 Fax: 905-839-6536 E-mail: white_richard@durham.edu.on.ca
School 2	**Eastdale Collegiate and Vocational Institute** 265 Harmony Rd North Oshawa ON L1J 1G5
School contact	Name: Mary Shea Title: Principal Phone: 905-723-8157 Fax: 905-728-7760 E-mail: shea_mary@durham.edu.on.ca

Partners:	
Business/Community	Durham Region Local Industry Committee
College	Durham College

Program Profile: Catholic District School Board of Eastern Ontario

Name of Initiative	**IMPACT (Innovative Motive Power Access to Careers in Transportation)**
Brief description	The program focuses on the safe operation, maintenance, trouble-shooting, and repair of vehicles, as well as on the environmentally responsible use of vehicles and the non-renewable resources they require. Students engage in experiential learning activities in college vehicle maintenance labs and with local businesses.
Number of students	35
Board	**Catholic District School Board of Eastern Ontario** 2755 Hwy 42 Kemptville ON K0G 1J0
Board contact	Name: Sheila Farris Title: Supervising Principal of Student Success Phone: 613-283-5007 ext. 263 Fax: 613-283-5783 E-mail: Sheila.Farris@cdsbeo.on.ca
School 1	**St. Joseph Catholic Secondary School** 1500A Cumberland St Cornwall ON K6J 5V9
School contact	Name: Steve Armstrong Title: Teacher Phone: 613-932-0349 Fax: 613-936-0419 E-mail: Steve.Armstrong@cdsbeo.on.ca
School 2	**St. Francis Xavier Catholic High School** Box 159 1235 Russell Rd Hammond ON K0A 2A0
School contact	Name: Tamas Dregley Title: Teacher Phone: 613-487-2913 Fax: 613-487-3856 E-mail: tech1253@yahoo.com

Partners:	
Business/Community	- Auto Parts Plus - Brookshell Pontiac Buick - Canadian Tire - Eastern Ontario Training Board - Embrun Dodge - Embrun Ford - Passport to Prosperity
College	St. Lawrence College
University	University of Guelph – Kemptville Campus

Program Profile: Conseil scolaire de district catholique de l'Est ontarien

Name of Initiative	**SHSM Transportation**
Brief description	The CSDCEO's SHSM in transportation is part of the AMTEO (Académie des métiers et de la technologie de l'Est ontarien) initiative. The program has pathways for apprenticeship, college, and the workplace. The university pathway will be developed in time for the second year of the project.
Number of students	32
Board	**Conseil scolaire de district catholique de l'Est ontarien** 875, chemin de comté 17 L'Orignal ON K0B 1K0
Board contact	Name: Céline Cadieux Title: Surintendante de l'éducation Phone: 613-675-4691 Fax: 613-675-2789 E-mail: cadice@csdceo.on.ca
School	**École secondaire catholique de Plantagenet** 6150, chemin de comté 17 Plantagenet ON K0B 1L0
School contact	Name: Sylvie Labrèche Title: Directrice Phone: 613-673-5124 Fax: 613-673-2294 E-mail: labrsy@csdceo.on.ca
Partners: **Business/Community**	- Carriere & Poirier Equipment Ltd. - Casselman Farm Equipment - Curran Farm Equipment - DanR Equipment
College	La Cité collégiale
Universities	- Campus d'Alfred – Université de Guelph - Université d'Ottawa

Program Profile: Grand Erie District School Board

Name of Initiative	**Destination Transportation**
Brief description	Destination Transportation allows students to gain knowledge and skills in auto design and service. Students work on small and large vehicles, using industry-standard tools, equipment, and software. They also learn about and practise procedures for working safely in this trade.
Number of students	8
Board	**Grand Erie District School Board** 349 Erie Ave Brantford ON N3T 5V3
Board contact	Name: Suzanne Cass Title: School-to-Work Officer Phone: 519-754-1606 ext. 287239 Fax: 519-754-4842 E-mail: casssuz@fc.gedsb.net
School	**Hagersville Secondary School** Box 669 70 Parkview Rd Hagersville ON N0A 1H0
School contact	Name: Rob Mehlenbacher Title: Technological Education Teacher Phone: 905-768-3318 Fax: 905-768-1616 E-mail: hssautoshop@execulink.com
Partners:	
Business/Community	- Grand Erie Training and Adjustment Board - Grand Mills - Heaslip Motors - Henderson Automotive - Laidlaw Carriers - McBurney Transport - Nottingham's Truck Service - Ontario Safety Service Association - St. Leonard's Community Services
College	Mohawk College

Program Profile: Conseil scolaire catholique de district des Grandes Rivières

Name of Initiative	**Transportation**
Brief description	This initiative is taught in partnership with Collège Boréal and employers in Northern Ontario. Its goal is to promote careers in the transportation sector in this part of the province. Through OYAP, students in the program can pursue either the heavy duty equipment technician or the automotive service technician apprenticeship.
Number of students	15–20
Board	**Conseil scolaire catholique de district des Grandes Rivières** 896, promenade Riverside Timmins ON P4N 3W2
Board contact	Name: Madeleine Beaulac Title: Superviseure, Apprentissage jusqu'a l'âge de 18 ans Phone: 705-647-5618 Fax: 705-647-4234 E-mail: beaulacm@cscdgr.on.ca
School 1	**École secondaire catholique Thériault** 341, boulevard Thériault Timmins ON P4N 7K3
School contact	Name: Mark Giroux Title: Directeur Phone: 705-267-1491 Fax: 705-267-2721 E-mail: girouxm@cscdgr.on.ca
School 2	**École secondaire catholique Hearst** 30, 10^{e} rue CP 13000 Hearst ON P0L 1N0
School contact	Name: Agathe Côté Title: Directrice Phone: 705-362-4283 Fax: 705-362-5005 E-mail: cotea@cscdgr.on.ca

Partners:	
Business/Community	- Tembec and Grant - Toromont
College	Collège Boréal
University	Université de Hearst

Program Profile: Kawartha Pine Ridge District School Board

Name of Initiative	**Automotive Design and Maintenance**
Brief description	The program focuses on vehicle design, automotive diagnostics, and vehicle maintenance and repair, and emphasizes problem solving and using tools productively and safely. Students acquire an in-depth understanding of body system components and automotive systems, including engine, cooling, lubrication, fuel, emission, electric/electronics, transmission, brake, steering, and suspension systems.
Number of students	25
Board	**Kawartha Pine Ridge District School Board** 1994 Fisher Dr Peterborough ON K9J 7A1
Board contact	Name: Rob Andrews Title: Superintendent of Education, Student Success Leader Phone: 1-877-577-7048 ext. 2173 Fax: 705-742-7801 E-mail: Robert_Andrews@kprdsb.ca
School	**East Northumberland Secondary School** RR 3, 71 Dundas St Brighton ON K0K 1H0
School contact	Name: Craig Petherick Title: Head of Technological Education Phone: 613-475-0540 Fax: 613-475-3837 E-mail: Craig_Petherick@kprdsb.ca
Partners: **Business/Community**	- John's Equipment - Motosports - Munns Auto - Pearsall Motors - The Car Shop - Veley Collision
College	Loyalist College
University	University of Ontario Institute of Technology

Program Profile: Keewatin-Patricia District School Board

Name of Initiative	**Babaamaadizii-kakendaasowinnan**
Brief description	This program exposes students to diverse career opportunities in the transportation industry, including those related to the summer- and winter-sport-based tourism that is a feature of this community. This feature means that in addition to servicing and maintaining cars and trucks, students in the program learn about all-terrain vehicles, bikes, snow machines, outboard motors, and float planes. Students also acquire knowledge of and the ability to demonstrate safe practices and procedures pertaining to work in this sector.
Number of students	120
Board	**Keewatin-Patricia District School Board** 100 First Ave West Kenora ON P9N 3Z7
Board contacts	Name: Mary Anne Bishop Title: Student Success Leader Phone: 807-727-3405 Fax: 807-727-1159 E-mail: Maryanne.bishop@kpdsb.on.ca Name: Gerry Bozzo Title: Workplace Special Assignment Teacher Phone: 807-468-5571 Fax: 807-468-3857 E-mail: Gerry.bozzo@kpdsb.on.ca
School 1	**Ignace High School** Box 418 194 Davey Lake Rd Ignace ON P0T 1T0
School 2	**Dryden High School** 79 Casimir Ave Dryden ON P8N 2Z2
School 3	**Beaver Brae Secondary School** 1400 Ninth St North Kenora ON P9N 2T7

Partners:

Business/Community	• Auto Parts Central • A.W. Alcock Trucking • Bayview Motors • Bearskin Airlines • Bennett's Marine Service • Bushey's Repair • Canadian Helicopters • Canadian Tire • C&C Husky • Degagne Enterprises • Degagne Motors • Derouard Motor Products • Dinwall Ford • Dryden GM • Enterprise Rent-a-Car • Excel Coachlines • Forest Helicopters • Godbout Auto • Hilltop Carstar Quality Collision Center • Ignace Airways • J.D. Auto • John's Outboard Service • Kantola Motors • Kenora Air Service • Kenora Mobile Marine • K-Sports Marine • Kuby's Aircraft • McKie's Marine Enterprises • Minute Muffler • Motorcity Sports • NAPA Auto Parts • National Car and Truck Rental • Neniska Repair • Northern Tire and Auto Service • Northwest Mechanical Services • OK Tire and Auto Service • Olson Honda • Pine Portage Service • Piston Ring Service • R&T Tires • Rattai's Value Automotive • River Air Service • Roger's Quality Auto • Rust Check • Smitty's Auto Body • The Auto Shop • Wally's Auto Service of Kenora • Walsten Air Service • Wharf Marina • Woodlake Marine • WSK Auto Sales
College	Confederation College
University	Lakehead University

Program Profile: Niagara Catholic District School Board

Name of Initiative	**AAA (Advanced Automotive Applications) Experience**
Brief description	This program, which is offered at three locations, provides education and training in the service, maintenance, and restoration of automobiles, truck and coach diesel engines, and small engines. The Grade 12 major credits are delivered off-site in an industrial plaza. Transportation businesses in the plaza provide support through experiential learning opportunities and specialized instruction. The program is available to all students in the board.
Number of students	20–30
Board	**Niagara Catholic District School Board** 427 Rice Rd Welland ON L3C 7C1
Board contact	Name: John Crocco Title: Superintendent of Education Phone: 905-735-0240 ext. 228 Fax: 905-735-9710 E-mail: john.crocco@ncdsb.com
School 1	**Saint Michael High School** 8699 McLeod Rd Niagara Falls ON L2E 6S5
School contact	Name: Scott Hunter Title: Teacher Phone: 905-356-5515 Fax: 905-356-6626 E-mail: scott.hunter@ncdsb.com
Off-site campus	**Notre Dame College School** 89 Shaw St Welland ON L3B 5W9
Off-site campus contact	Name: Aaron Vasas Title: Teacher Phone: 905-788-3060 Fax: 905-788-2375 E-mail: aaron.vasas@ncdsb.com

School 2	**Denis Morris Catholic High School** 40 Glen Morris Dr St. Catharines ON L2T 2M9
School contact	Name: Andy Kittel Title: Teacher Phone: 905-684-8731 Fax: 905-684 4050 E-mail: andrew.kittel@ncdsb.com
Partners:	
Business/Community	- Apprenticeship Strategies Group - Business Education Council (BEC) - Commercial Auto Trim and Glass - Delta One Collision - Kabroro Auto Pro - Niagara Training and Adjustment Board (NTAB) - RWS Automotive Services - The Young Auto Professionals
College	Niagara College

Program Profile: Simcoe County District School Board

Name of Initiative	**Transportation Across the Sector** **Small Engines / Mobile Heavy Equipment / Aviation**
Brief description	This program, offered at three high schools in the county, covers a variety of transportation technology areas. While students at Midland Secondary School can focus on either small engines or marine engines, those at Bear Creek Secondary School can choose between small engines and mobile heavy equipment. Meanwhile, the program at Bradford District High School concentrates on aviation. Students who focus on marine engines earn a dual credit from Georgian College's Centre of Excellence for Recreational Boating. Students concentrating on aviation construct airplane components, and those studying mobile heavy equipment learn how to operate large construction equipment.
Number of students	56
Board	**Simcoe County District School Board** 1170 Hwy 26 Midhurst ON L0L1X0
Board contact	Name: Lorraine O'Halloran Title: Principal of Student Success Phone: 705-734-6363 ext. 11315 Fax: 705-734-6320 E-mail: lohalloran@scdsb.on.ca
School 1	**Bradford District High School** 70 Professor Day Dr Bradford ON L3Z 2A3
School contact	Name: Dana Barakauskas Title: Principal Phone: 905-775-2262 Fax: 905-775-3192 E-mail: dbarakauskas@scdsb.on.ca
School 2	**Bear Creek Secondary School** 100 Red Oak Dr Barrie ON L4N 9M5
School contact	Name: Grant Edwards Title: Principal Phone: 705-725-7712 Fax: 705-720-1088 E-mail: gedwards@scdsb.on.ca

School 3	**Midland Secondary School** 865 Hugel Ave West Midland ON L4R1X8
School contact	Name: Craig Hawkins Title: Principal Phone: 705-526-7817 Fax: 705-526-1442 E-mail: chawkins@scdsb.on.ca
Partners:	
Business/Community	- Bourgeois Motors - Canadian Aviation Maintenance Council - Jack and Jill's Motor Sports - On Trac - Skyservice - Tormont
Colleges	- Centennial College - Fleming College - Georgian College

Program Profile: Upper Canada District School Board

Name of Initiative	**Momentum**
Brief description	This program exposes students to a variety of transportation industry careers. Depending on their postsecondary destination, students focus on the knowledge and skills necessary for careers such as automotive service technician, truck and coach mechanic, auto body repairer, heavy equipment technician, and car detailer. In addition to learning about work in a sector that interests them, students are motivated to pursue this interest from the enthusiasm and commitment of the program's community and business partners.
Number of students	10–20
Board	**Upper Canada District School Board** 225 Central Ave West Brockville ON K6V 5X1
Board contact	Name: Scott Corden Title: Student Success Leader Phone: 613-342-0371 ext. 1201 Fax: 613-342-6493 E-mail: scott.corden@ucdsb.on.ca
School	**Cornwall Collegiate and Vocational School** 237 Sydney St Cornwall ON K6H 3H9
School contact	Name: Marie Schuler Title: Counsellor Phone: 613-932-8360 ext. 4655 Fax: 613-932-8128 E-mail: marie.schuler@ucdsb.on.ca
Partners:	
Business/Community	- Brookshell - Canadian Tire - Cornwall Motor Sales - Cornwall Toyota - Eastern Ontario Training Board - Miller Hughes
College	St. Lawrence College